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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,470	08/13/2001	Patrick Louis-Rene Riffault	42390.P7141c	1163

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EXAMINER

CHAUHAN, ULKA J

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 07/21/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,470

Applicant(s)

RIFFAULT, PATRICK LOUIS-RENE

Examiner

Ulka J. Chauhan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on 5/21/03 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,275,240 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Amendment

2. The finality of the rejection of the last Office action is withdrawn in view of the newly discovered reference, U.S. Patent No. 6,549,963 to Sayles. Rejections based on the newly cited reference follow.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 1 recites the limitation "the graphics device" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's

Admitted Prior Art (APA) and U.S. Patent No. 6,070,211 to Neal et al.

8. As per claims 1-7, Applicant admits in paragraph [0005] that "prior 2X mode AGP

graphics device normally includes input/output buffers for two address/data strobe signals

(AD_STB0 and AD_STB1) and an input buffer for a sideband strobe signal (SB_STB). An AGP

bus that allows 4X mode operation provides compliments of the above strobe signals

(AD_STB0#, AD_STB1#, and SB_STB#) in addition to the above strobe signals. When the

prior 2X mode AGP graphics device is installed on the AGP bus capable of 4X mode operation,

the strobe compliment signals in prior systems are not connected at the prior 2X mode AGP

graphics device. If an upgrade 4X mode AGP graphics device is installed on the 4X mode

capable AGP bus in parallel with the prior 2X mode AGP device, a situation is created where the

AD_STB0, AD_STB1, and SB_STB signals have three capacitive loads (one at a memory

controller, one at the prior 2X mode AGP graphics device, and one at the upgrade 4X mode AGP

graphics device) and the AD_STB0#, AD_STB1#, and SB_STB# signals have two capacitive

loads (one at the memory controller and one at the upgrade 4X mode AGP graphics device). This

difference in capacitive loading between the strobe signals and their compliments would have a

negative impact on graphics bus timing relationships, and therefor a negative impact on system

reliability."

9. Neal teaches a system supporting differential signaling circuitry in which a bus comprises

differential signal conductor pairs provided over a first line and a second line coupled to a

termination network for terminating the first line and the second line [Abstract]. Neal discloses

that employing balanced loads on the signal lines eliminates reflections resulting in single

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incident signaling, and includes a resistive load at the connection to differential signal line pairs [col. 6 lines 42-51]. Neal discloses that the value of the resistive load is selected to ensure that the loads seen by differential signal line pairs remains substantially balanced and that each set of resistive load for each differential signal may be located on the mother board, one set near the PCI host bridge and the other set at the opposite end of the PCI bus [col. 6 lines 57-64].

10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of APA and Neal such that the AD_STB0#, AD_STB1#, and SB_STB# signals, having two capacitive loads when an upgrade 4X mode AGP graphics device is installed on the 4X mode capable AGP bus in parallel with the prior 2X mode AGP device, are terminated at a termination network comprising buffers similar to the buffers for AD_STB0, AD_STB1, and SB_STB signals in the prior 2X mode AGP device, and that provide a balanced load so that reflections on the signal lines are eliminated resulting in single incident signaling.

11. As per claim 8, since APA [0005] discloses a situation where a prior 2X mode AGP graphics device is installed on the AGP bus capable of 4X mode operation and an upgrade 4X mode AGP graphics device is installed on the 4X mode capable AGP bus in parallel with the prior 2X mode AGP device. The remainder of claim 8 and claims 9-17 recite limitations similar in scope to claims 1-7, and therefore, claims 8-17 are rejected under the same rationale.

12. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6549963

U.S. Patent No. 6170029

U.S. Patent No. 6029216

U.S. Patent No. 5926031

U.S. Patent No. 5884053

U.S. Patent No. 5613130

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U.S. Patent No. 5264744

U.S. Patent No. 5054062

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ulka Chauhan** whose telephone number is **(703) 305-9651**. The examiner can normally be reached Mon.-Fri. from 9:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 305-4700.



Ulka J. Chauhan
Primary Examiner
Art Unit 2676

ujc
July 14, 2003



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600